

Front axle components, overview

General Information

Load bearing components and parts of the suspension must not be welded or straightened.

Vehicles without drive axle must not be moved, or wheel bearing will be damaged. If vehicle does have to be moved, always note the following points:

- Install an outer joint in place of the drive axle.
- Tighten outer joint to 115 Nm (M14 bolt) or 190 Nm (M16 bolt).

Bonded rubber bushings can only be turned to a limited extent. The bolted connections on suspension links should only be tightened when vehicle is standing on the ground.

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Threads in longmember, servicing

Servicing thread in weld nuts in longmember is possible under certain circumstances.

- ◆ Servicing must only be performed once per thread.
- ◆ If secondary servicing is required, the weld nut must be replaced.

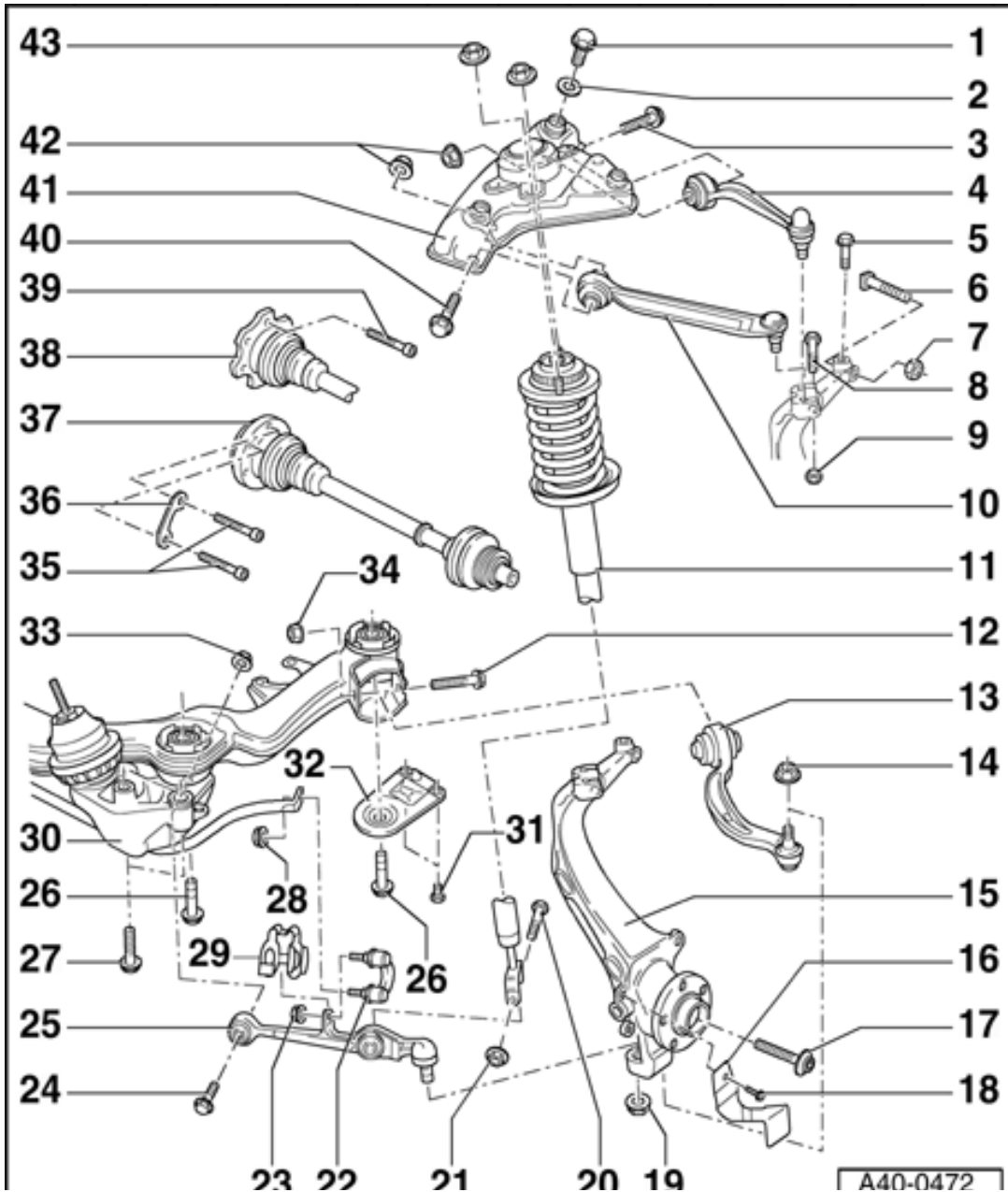
WARNING!

Wear protective glasses when drilling!

- ◆ Have responsible foreman or next superior check thread repair.
- ◆ Thread insert must have same length as thread in body.

◆ Repair possible damage to underbody; applicable notes can be found in:

⇒ *Repair Manual, Body Collision Repair, Repair Group 00; Corrosion protection measures*



Component overview

1 - Hex bolt, 75 Nm

2 - Washer

3 - Hex bolt M10 x 62

- ◆ Always replace after disassembly

4 - Upper rear link

- ◆ Replace bushing

- ◆ Separating from wheel bearing housing ⇒ [Page 40-15](#)

5 - Hex bolt, 5 Nm

- ◆ Bolt onto system

6 - Bolt

7 - Self-locking nut

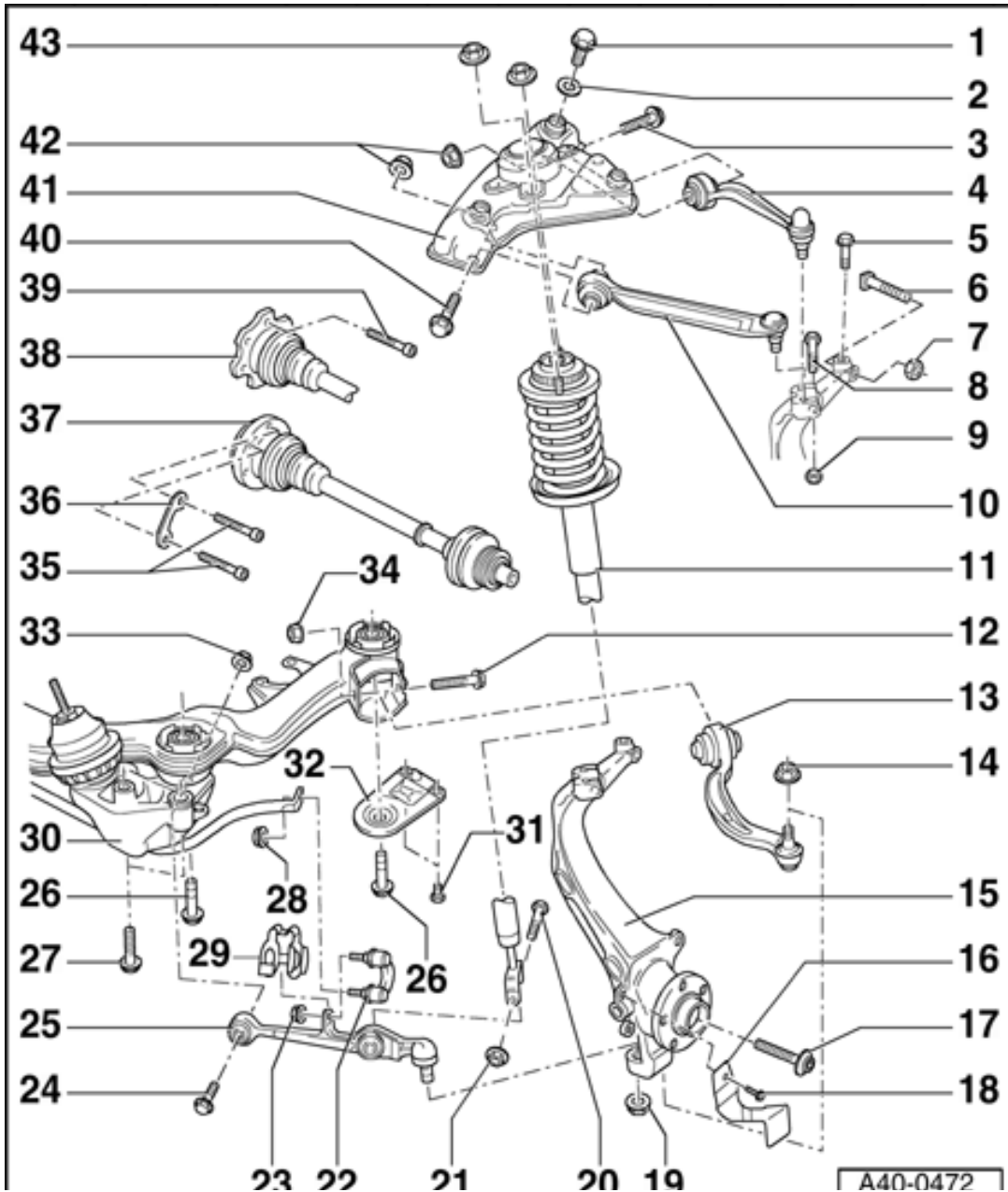
- ◆ Always replace after disassembly

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- ◆ 50 Nm for steel wheel bearing housing
- ◆ 45 Nm for aluminium wheel bearing housing

8 - Hex bolt M10 x 100



9 - Self-locking nut, 40 Nm

- ◆ Always replace after disassembly

10 - Front upper link

- ◆ Can be removed together with mounting bracket
- ◆ Mounting bracket, removing and installing ⇒ [Page 40-84](#)
- ◆ Replacing bushing ⇒ [Page 40-84](#)
- ◆ Separating from wheel bearing housing ⇒ [Page 40-15](#)

11 - Suspension strut

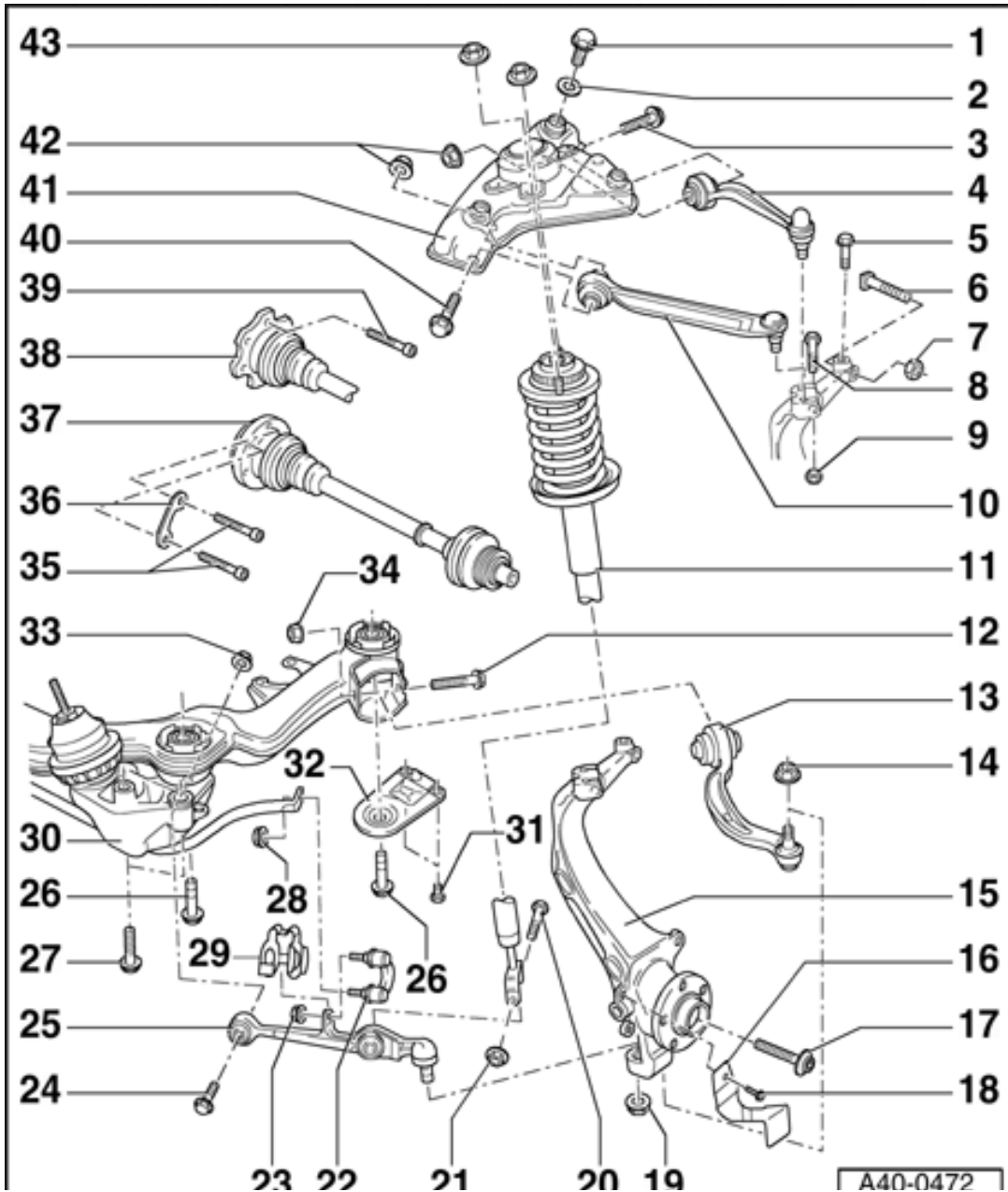
- ◆ Note varying spring/shock absorber versions, see vehicle data sticker ⇒ [Page 40-27](#)

◆ Removing and installing ⇒ [Page 40-19](#)

◆ Servicing ⇒ [Page 40-24](#)

12 - Hex bolt M12 x 1.5 x 120

◆ Always replace after disassembly



13 - Lower guide link

- ◆ If anti-vibration mount leaks it must be replaced ⇒ [Page 40-136](#)
- ◆ Application
- ◆ See Parts catalog

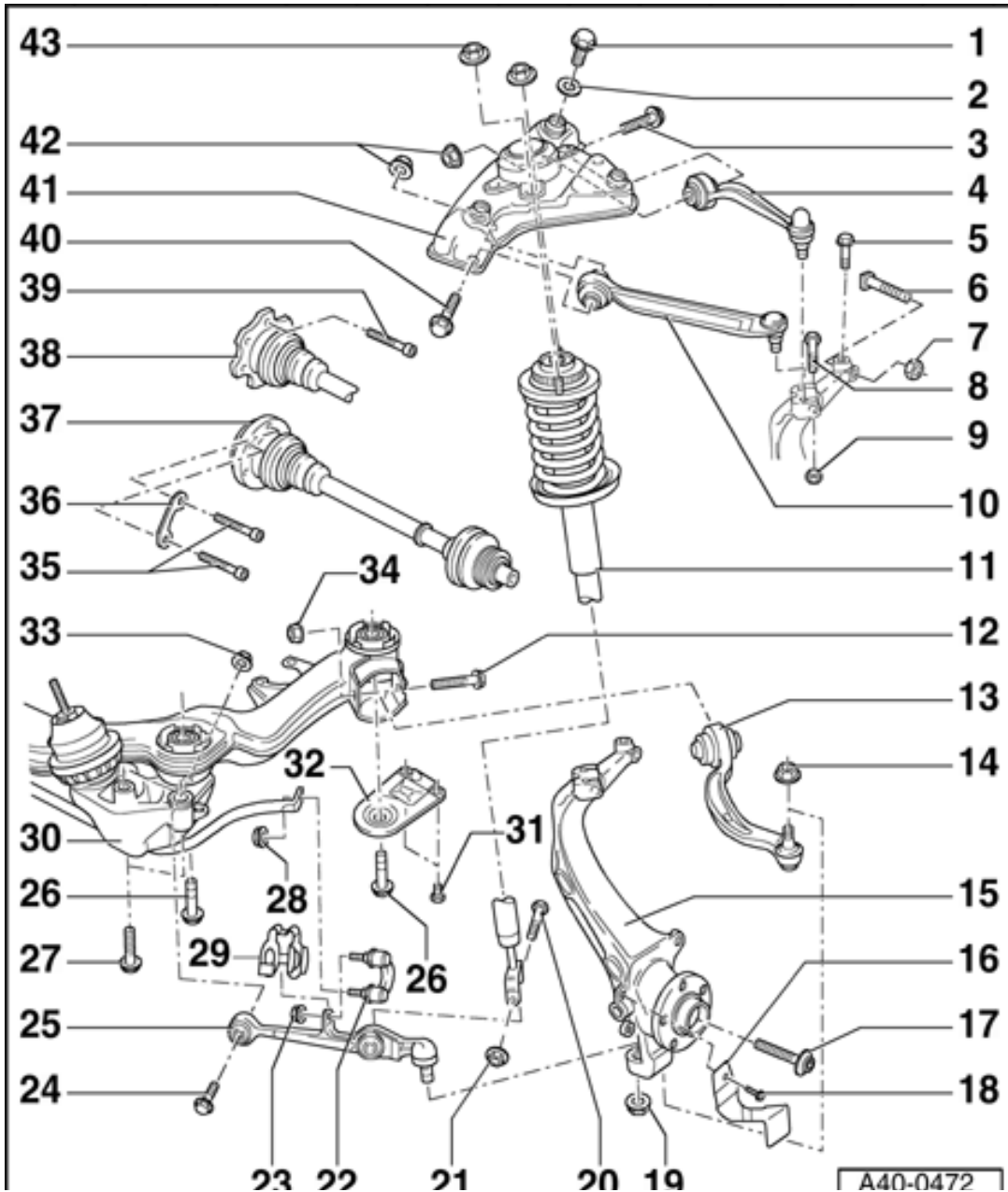
14 - Self-locking nut, 100 Nm

- ◆ 100 Nm for steel wheel bearing housing
- ◆ 110 Nm for aluminium wheel bearing housing
- ◆ Always replace after disassembly

15 - Wheel bearing housing

- ◆ There are versions with and without a groove for a ring on the tie rod end - only new version is supplied as a replacement part
- ◆ On vehicles with a headlight vertical aim control system be careful removing and installing ⇒ [Page 40-120](#)
- ◆ Removing and installing ⇒ [Page 40-35](#)
- ◆ Servicing ⇒ [Page 40-42](#)
- ◆ Separating from upper link ⇒ [Page 40-15](#)

16 - Backing plate



17 - Hex bolt

- ◆ Always replace after disassembly
- ◆ Vehicle must not be raised when tightening

Tightening torques:

Bolt
M14:

- ◆ 115 Nm plus additional 180° ($1/2$ - turn)

Bolt
M16:

- ◆ 190 Nm plus additional 180° ($1/2$ - turn)

18 - Socket head bolt, 10 Nm

19 - Self-locking nut, 100 Nm

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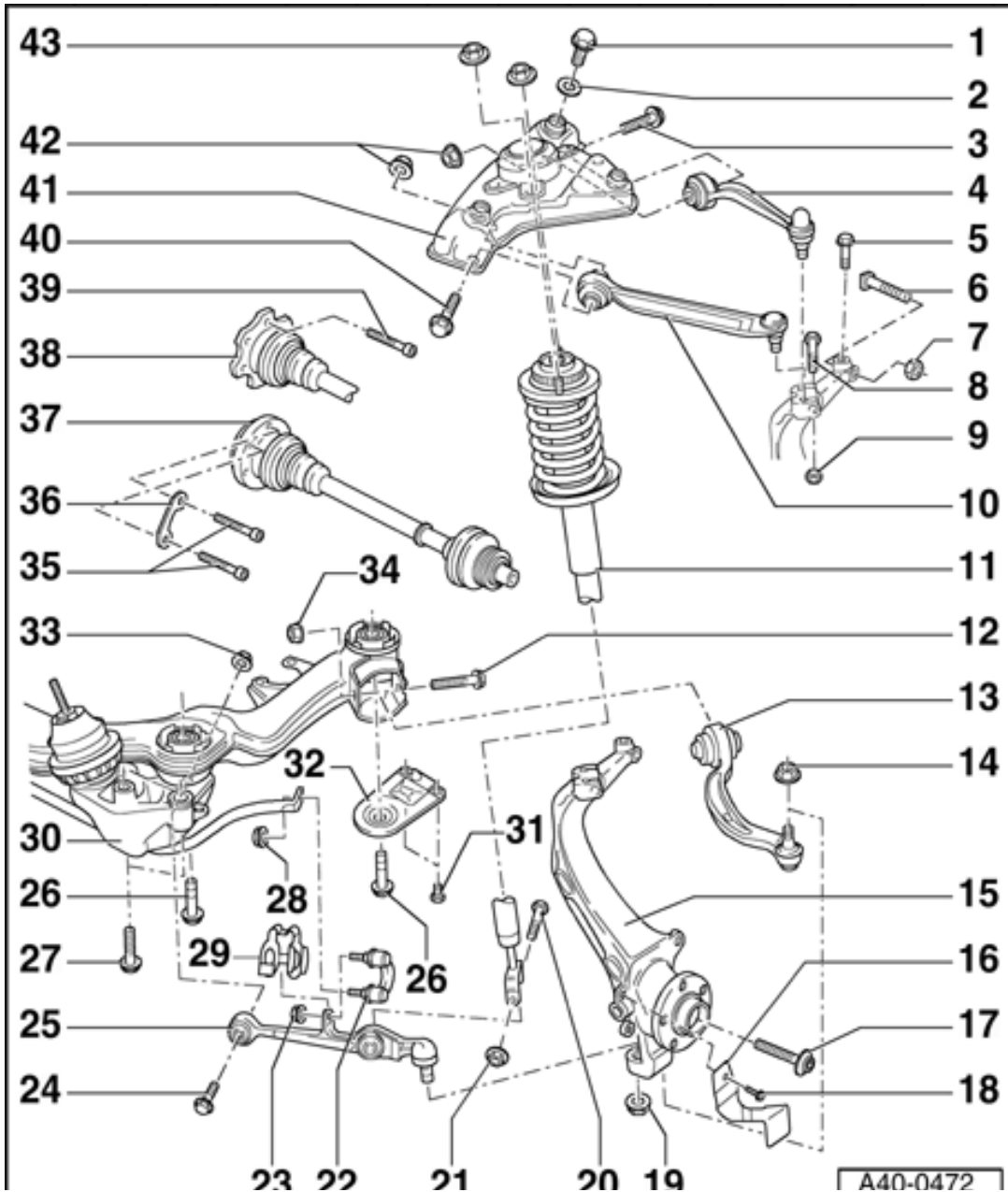
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- ◆ 100 Nm for steel wheel bearing housing
- ◆ 120 Nm for aluminium wheel bearing housing
- ◆ Always replace after disassembly

20 - Hex bolt M12 x 1.5 x 85

21 - Self-locking nut, 90 Nm

- ◆ Always replace after disassembly



22 - Coupling

- ◆ Arrow on coupling points in direction of travel
- ◆ Note change in coupling and in tightening torques
⇒ [Page 40-144](#)

23 - Self-locking hex nut

- ◆ Always replace after disassembly
- ◆ 40 Nm plus additional 90° (1/4 - turn)
- ◆ Nut has ribs on the bottom

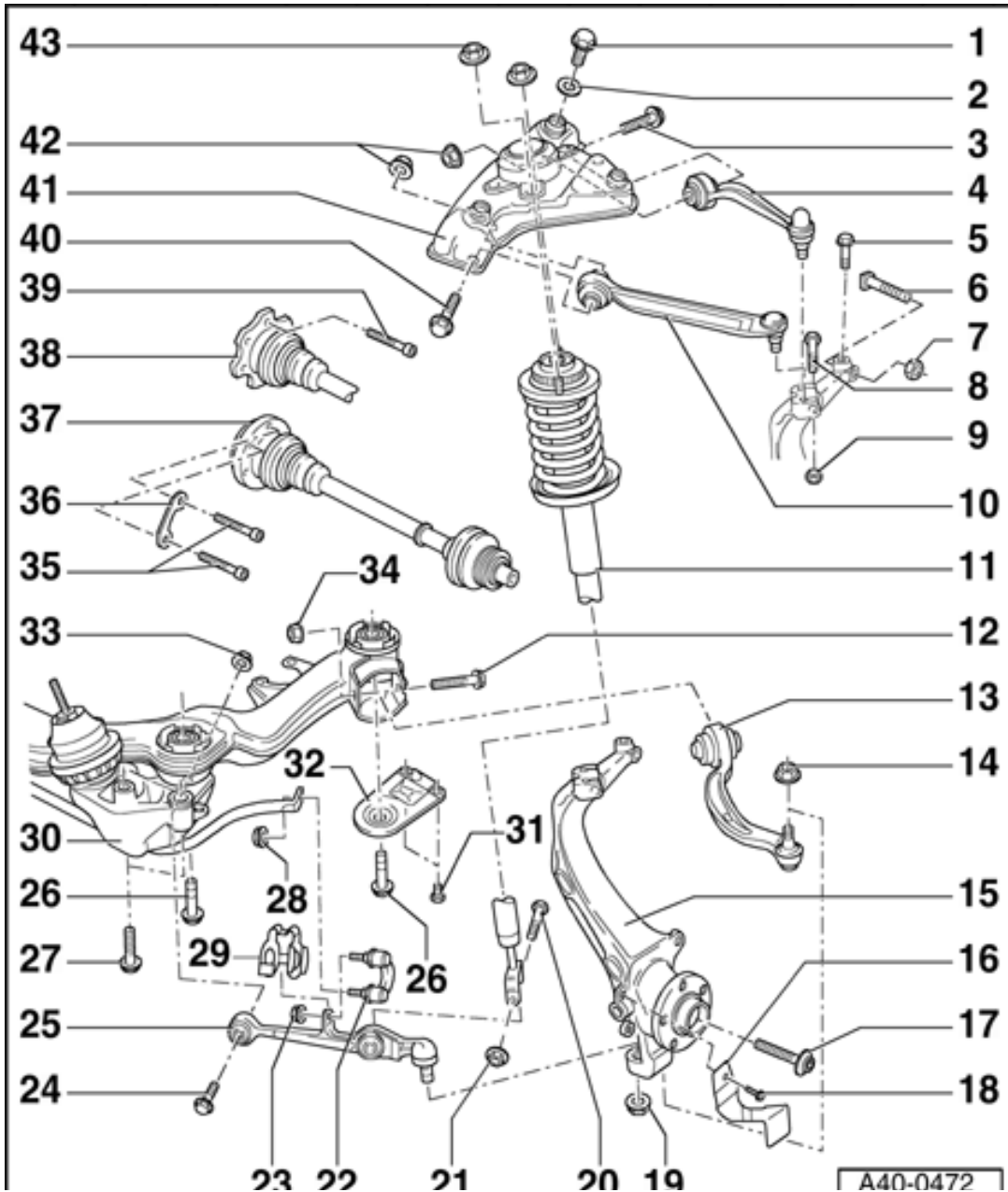
Only use this special nut as replacement!

24 - Hex bolt M12 x 1.5 x 100

- ◆ Always replace after disassembly

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25 - Lower track control link

- ◆ On vehicles with a headlight vertical aim control system be careful removing and installing vehicle level sensor ⇒ [Page 40-120](#)
- ◆ Removing and installing ⇒ [Page 40-117](#)
- ◆ Servicing ⇒ [Page 40-126](#)

26 - Hex bolt M12 x 1.5 x 110

- ◆ 110 Nm plus additional 90° (1/4 - turn)
- ◆ Always replace after disassembly

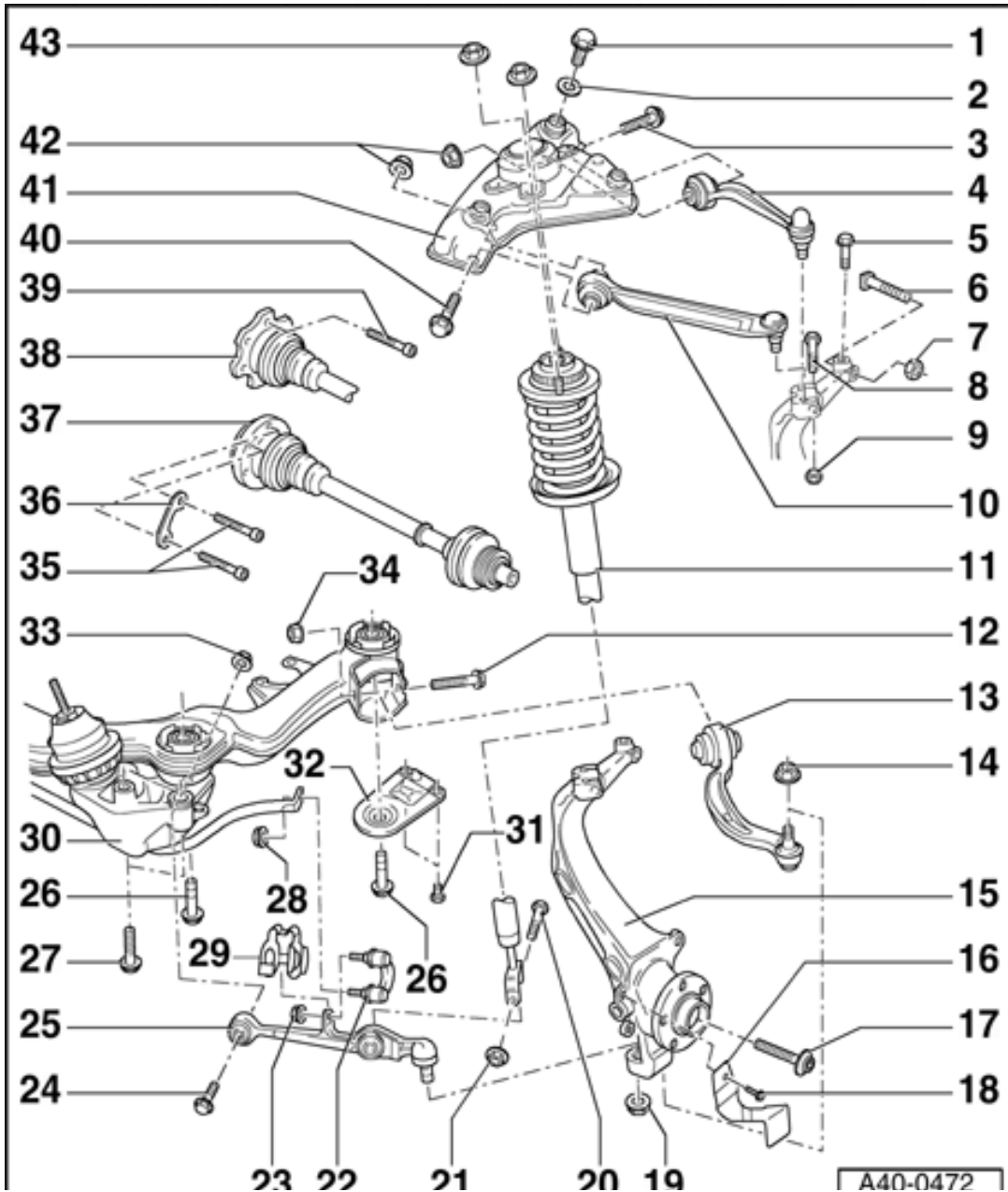
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- ◆ Thread in body can be repaired with thread insert made of wire according to DIN 8140 (Helicoil). Thread insert must have same length as thread in body.

27 - Hex bolt, 75 Nm

- ◆ M10 X 70
- ◆ Always replace after disassembly



28 - Self-locking nut, 100 Nm

- ◆ Note change in coupling and in tightening torques
⇒ [Page 40-144](#)

- ◆ nut has ribs on the bottom

- ◆ Always replace after disassembly

Only use this special nut as replacement!

29 - Clip

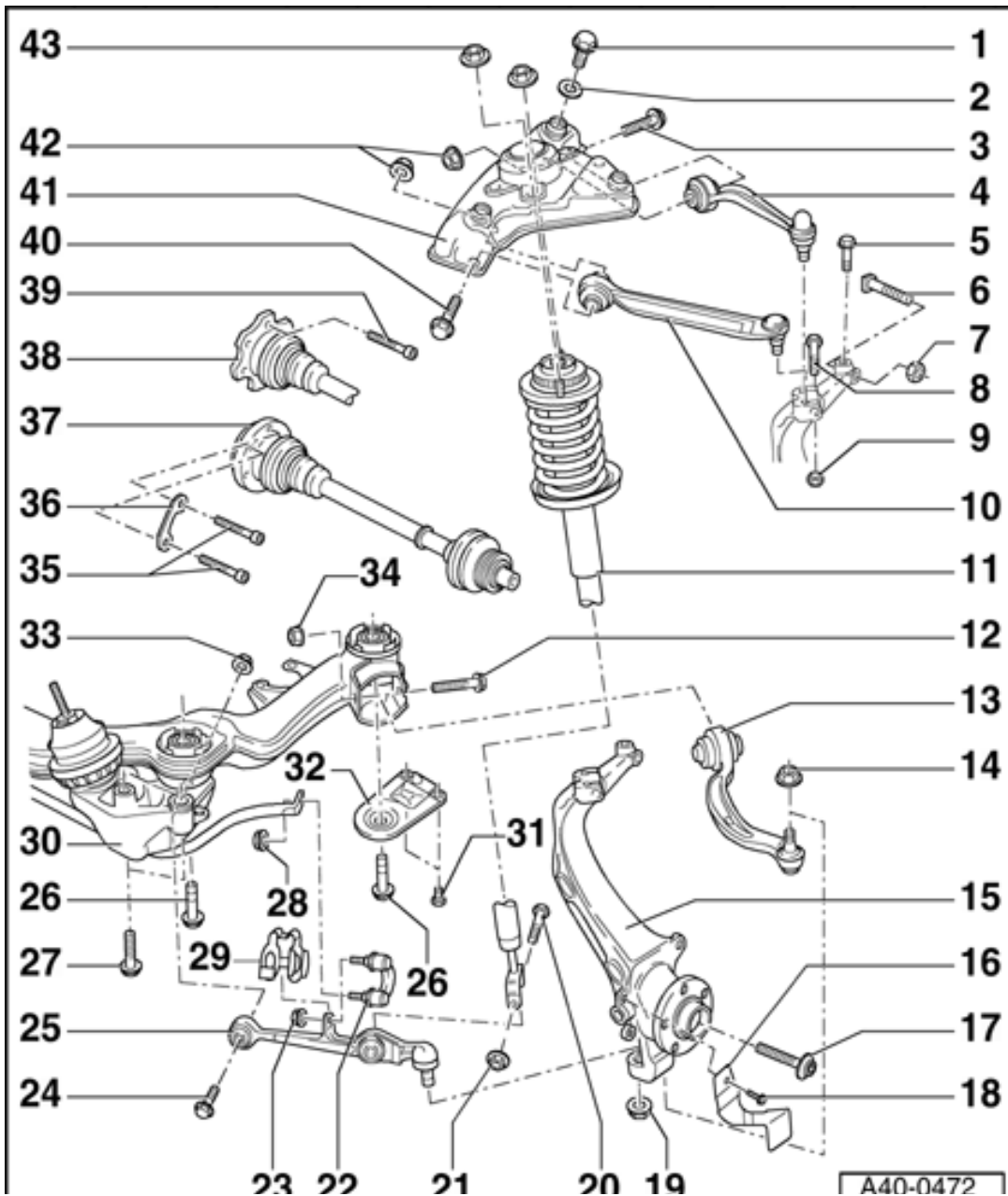
- ◆ inserted in track control link

- ◆ Always replace

30 - Subframe

- ◆ On vehicles with a headlight vertical aim control system be careful removing and installing ⇒ [Page 40-120](#)

- ◆ Removing and installing ⇒ [Page 40-102](#)
- ◆ Servicing ⇒ [Page 40-111](#)



31 - Hex bolt, 25 Nm

- ◆ Always replace after removing
- ◆ Observe different bolt versions and tightening torques
⇒ [Fig. 6](#) ⇒ [Page 40-13](#)

32 - Subframe support

33 - Self-locking nut

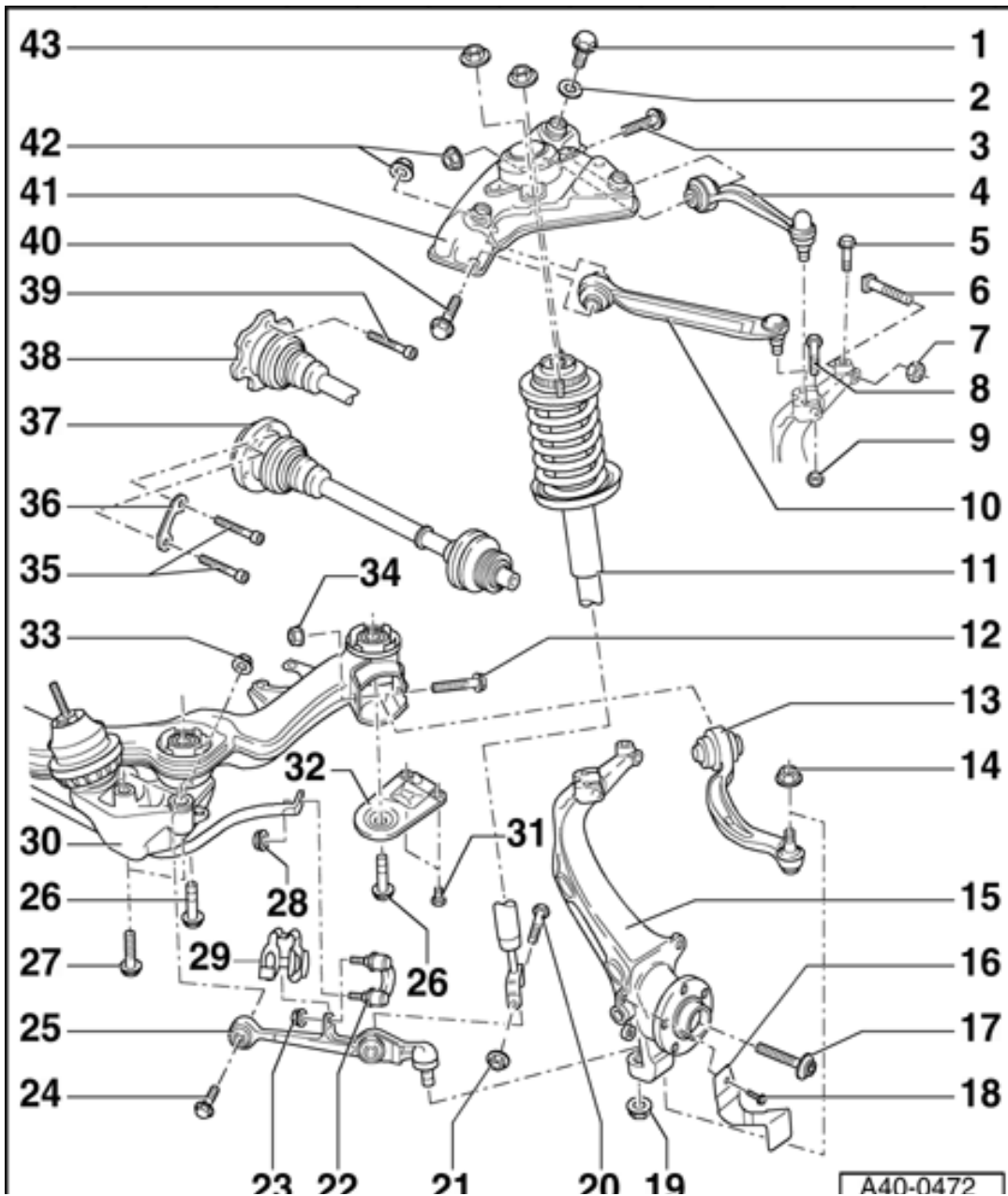
- ◆ 70 Nm plus additional $180^\circ \pm 1/2$ turn
- ◆ Always replace after removing

34 - Self-locking nut

- ◆ 70 Nm plus additional $180^\circ \pm 1/2$ turn
- ◆ Always replace after removing

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35 - Socket-head bolt

- ◆ Tightening torques:

Bolt M8 X 48: 40 Nm

Bolt M10 X 48: 70 Nm

36 - Backing plate

37 - Drive axle

- ◆ Removing and installing ⇒ [Page 40-147](#)
- ◆ Servicing ⇒ [Page 40-151](#)

38 - Drive axle with triple roller joint

- ◆ Servicing ⇒ [Page 40-164](#)

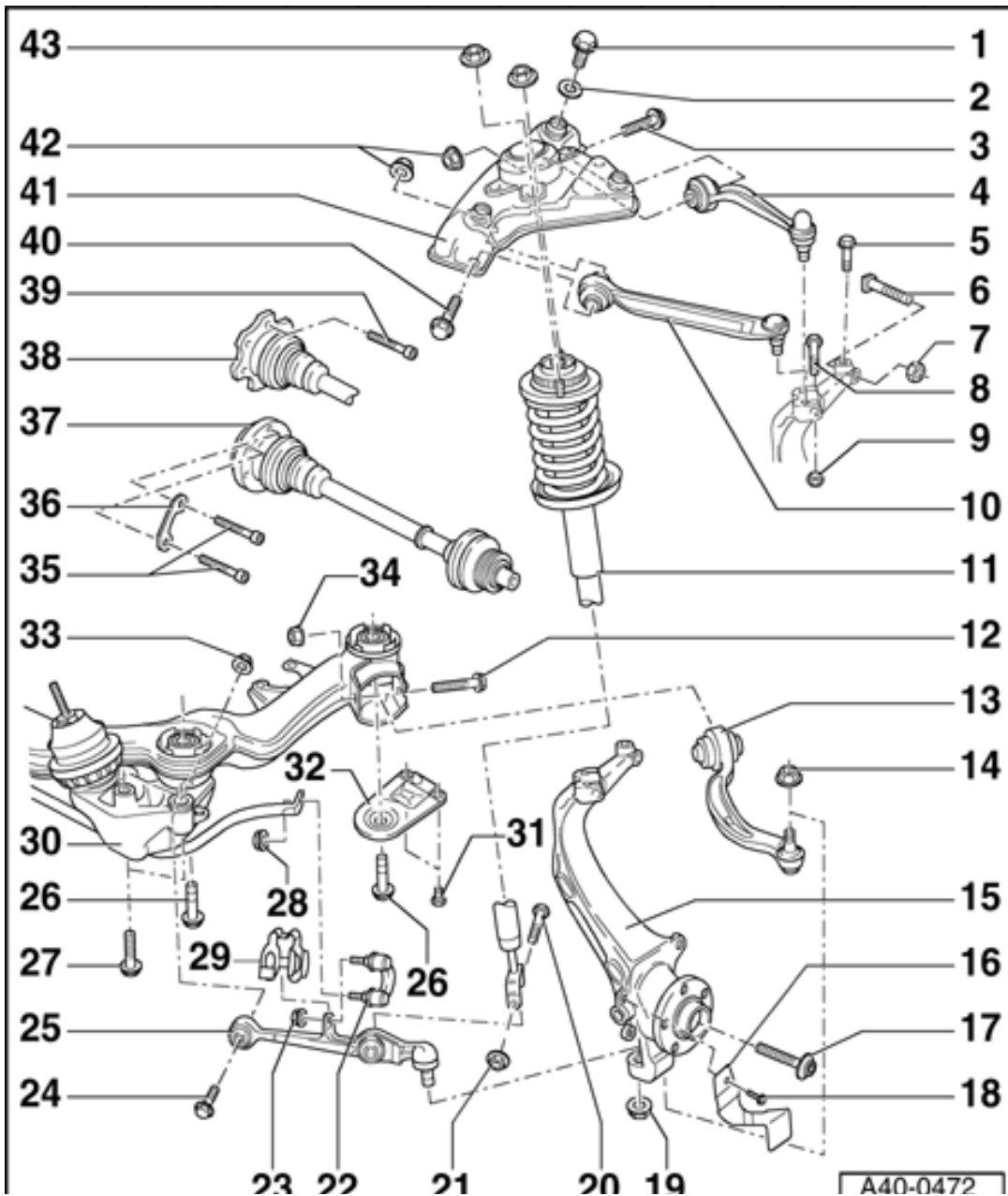
39 - Twelve-point socket head bolt, 70 Nm

- ◆ For vehicles with triple roller joint

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◆ M10 X
20



40 - Hex bolt M10 x 62

- ◆ Always replace after disassembly

41 - Mounting bracket

- ◆ Removing and installing ⇒ [Page 40-84](#)

42 - Self-locking nut

- ◆ 50 Nm plus additional 90° (1/4 - turn)
- ◆ Always replace after disassembly

43 - Self-locking nut with flange, 20 Nm

- ◆ Always replace after disassembly

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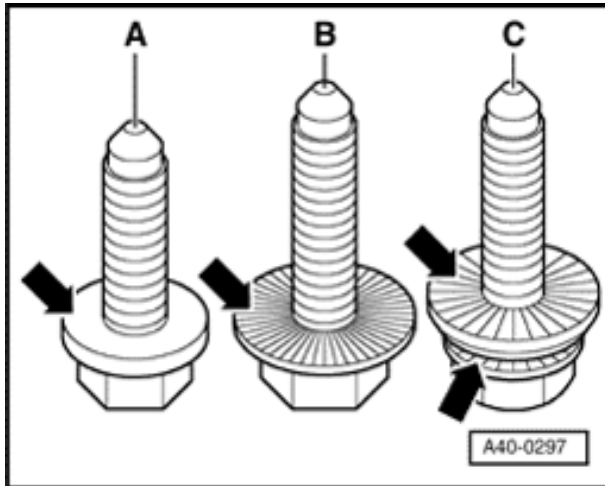


Fig. 6 Bolt versions

Bolt -A- without ribbing.

Tightening torques: 25 Nm

Bolt -B- with ribbing.

Tightening torques: 75 Nm

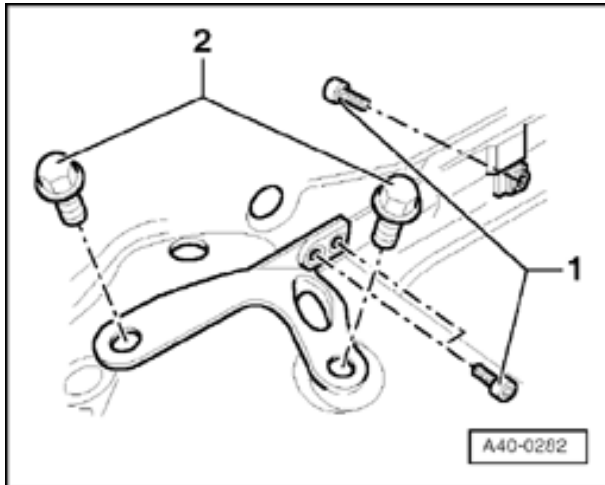
Bolt -C- with screw head and washer ribbing.

Tightening torques: 30 Nm and turn an additional 90°

All bolts must only be used once.



Mounting bracket with transverse beam, removing and installing



To remove and install mounting bracket with transverse beam, unscrew

- Hex bolt -1- (1x behind bulkhead)
- Hex bolts -2- (4x)

Tightening torques

- Hex bolts -
1-

Tightening torque 30
Nm

- Hex bolts -
2-

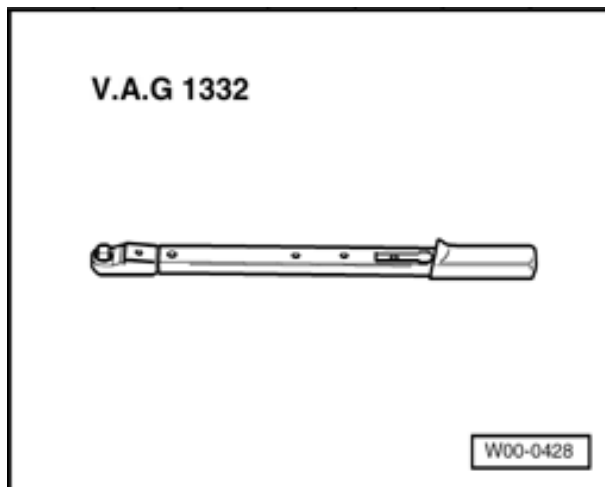
Tightening torque 75
Nm



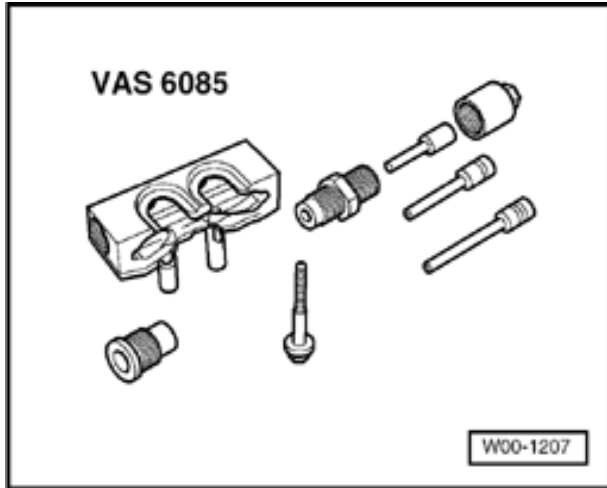
Upper link connection at wheel bearing housing (steel), separating

This operation is only necessary if hex bolt for connecting upper links to wheel bearing housing cannot be removed.

Special tools and equipment



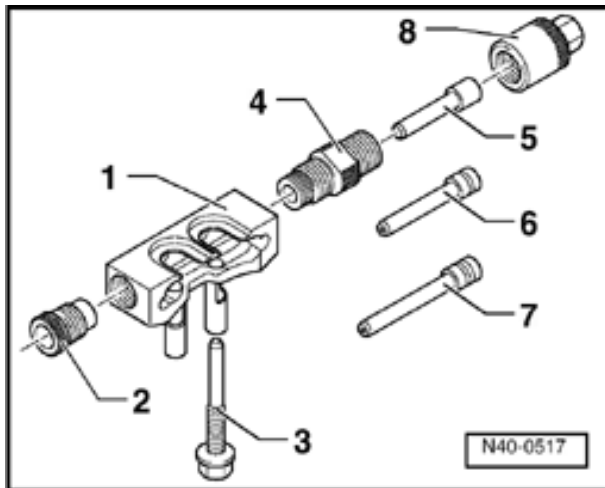
- ◆ V.A.G 1332 Torque wrench



◆ VAS 6085 Pressing-out tool



Removing



Pressing-out tool VAS 6085 components

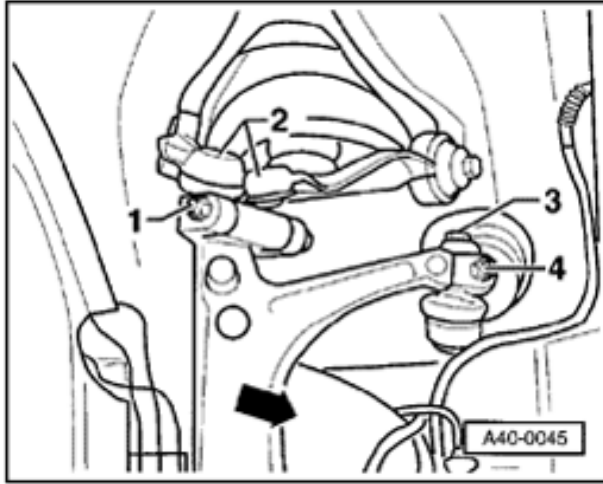
- 1 - Body
- 2 - Adapter
- 3 - Thrust bolt M10 x 1.25 x 95
- 4 - Threaded sleeve
- 5 - Press tool (length 78 mm)
- 6 - Press tool (length 98 mm)
- 7 - Press tool (length 118 mm)
- 8 - Nut

Note:

Apply polycarbamide grease Part no. G 052 142 A2

before starting work to thrust bolt, press tools and nut.

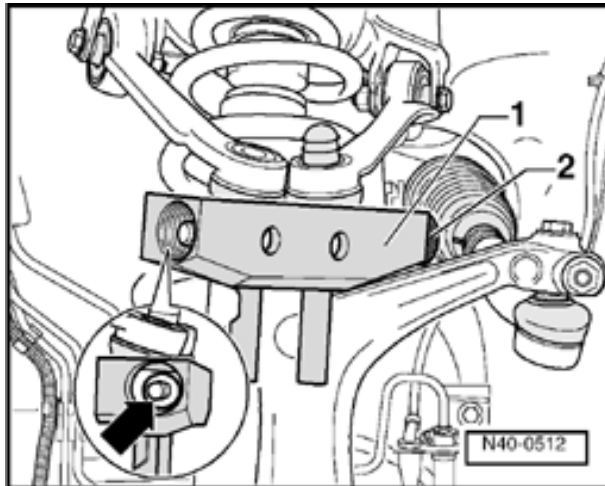
- Remove wheel.
- Disconnect ABS speed sensor wire out of holder at brake caliper.



A

- Unscrew nut - 1-

Bolts -3- and -4- are never to be loosened.

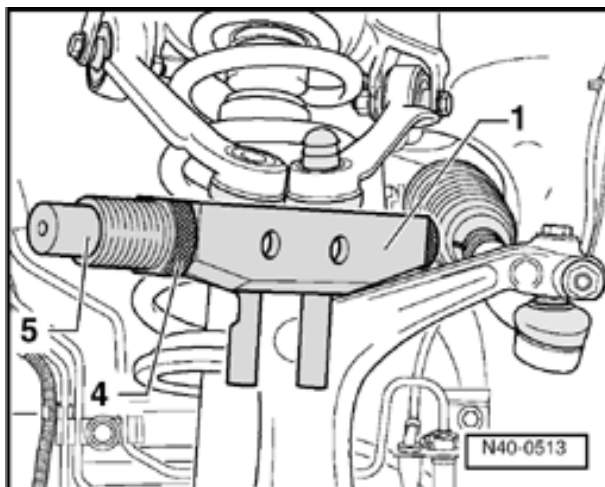


- ▲ - Position body -1- on wheel bearing housing. In doing so, recesses engage beneath joints of links.

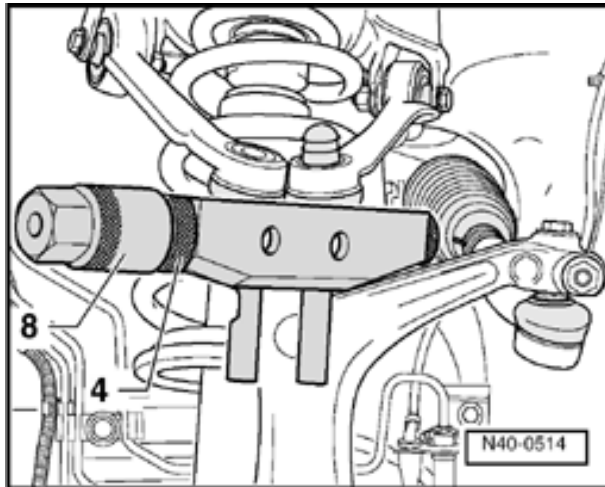
Note:

On inserting body, pay attention to boot as to avoid damage.

- Insert body -1- so that end of bolt (arrow) is centred in hole in body.
- Screw home adapter -2- in body -1- to lock body.



- ▲ - Screw home threaded sleeve -4- in body -1-.
- Insert press tool -5- in threaded sleeve -4-.



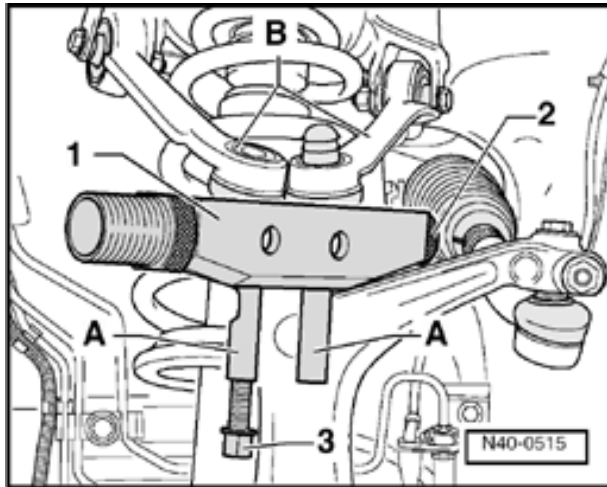
A

- Screw nut -8- onto threaded sleeve -4- and turn as far as it will go, thus pressing out bolt.

Note:

Use a wrench or an impact screwdriver to turn nut -8-.

- Unscrew nut -8- from threaded sleeve -4-, take out press tool -5- and insert press tool -6- in threaded sleeve -4-.
- Repeat pressing operation.
- If bolt can still not be taken out by hand, repeat pressing operation with press tool -7-.
- Unscrew nut -8- from threaded sleeve -4-. Take out press tool and bolt.



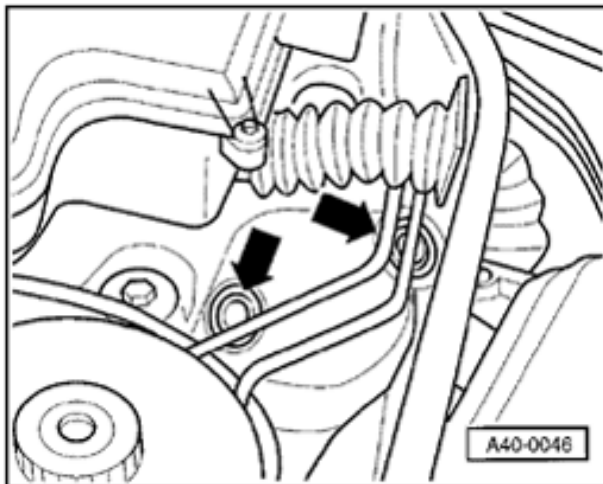
- Screw thrust bolt -3- into one of the guides -A- in each case and press links -B- out of wheel bearing housing.
- Screw thrust bolt -3- out of guide -A- and release adapter -2-.
- Detach body -1- from wheel bearing housing.



Suspension strut, removing and installing

Removing

- Remove cover plenum chamber / battery
- Remove hubcap, for light-alloy wheels pull off center cap (use pulling hook in vehicle tools).
- Remove wheels.
- Remove rubber grommets in plenum (arrows).



Note:

- ◆ For vehicles with headlight vertical aim control, ⇒ [Page 40-120](#) .
- ◆ In order not to damage joints of lower control arms, it is necessary to use engine/transmission jack VAG1383-A, for example, to brace against too strong rebound.

Vehicle

System

Repair Group

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Wiring Diagrams

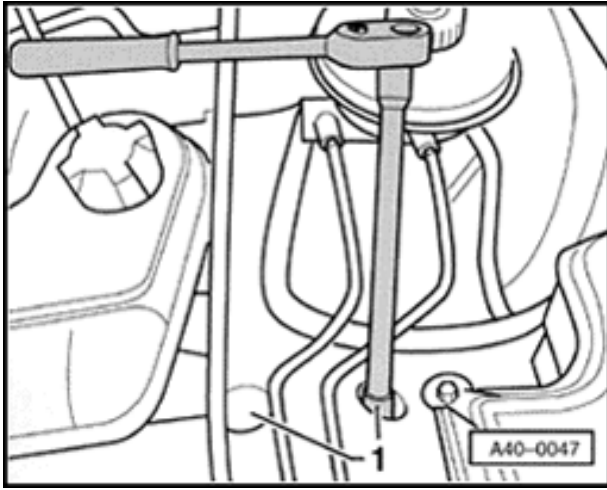
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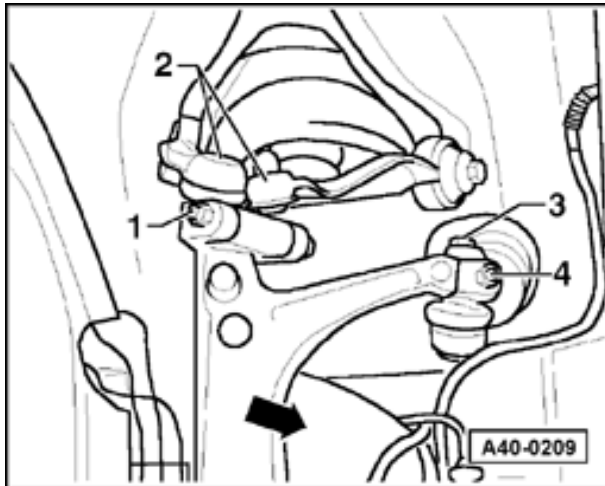


- Unscrew suspension strut from body.

1 -
Nuts

- Pull cable of ABS wheel speed sensor out of bracket on brake caliper.

Be careful not to damage surface of brake lines!



A

- Unscrew nut -
1-

Slits in wheel bearing housing may not be widened with a chisel or similar tool!

- Remove hex bolt and lift out link -
2-
- Swing away wheel bearing housing toward side, in
direction of (arrow).

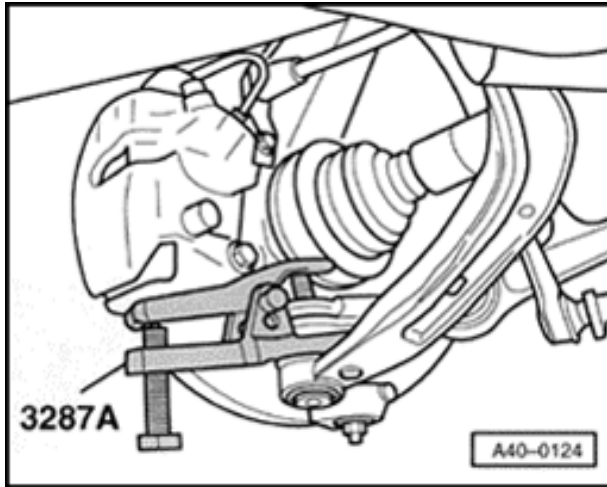
Bolts -3- and -4- may not be loosened!

Otherwise wheel adjustment must be checked!

To unscrew hex bolt from suspension strut/track control link, you must detach guide link from wheel bearing housing.

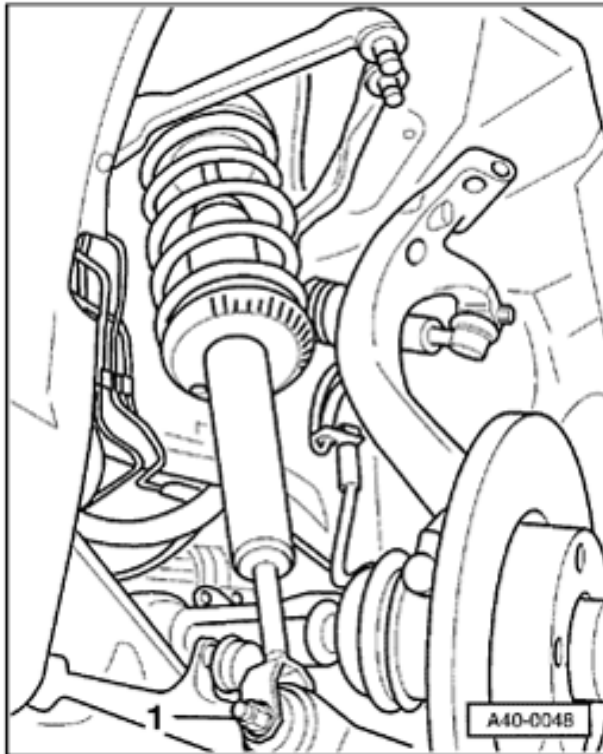
Use 4 mm socket wrench to hold joint bolt, if necessary.

- On vehicles with an aluminum wheel bearing housing be careful removing and installing guide link, ⇒ [Page 40-139](#)



- Unscrew guide link nut from joint bolt, then press off joint bolt.

Be careful not to damage CV boot in the process!



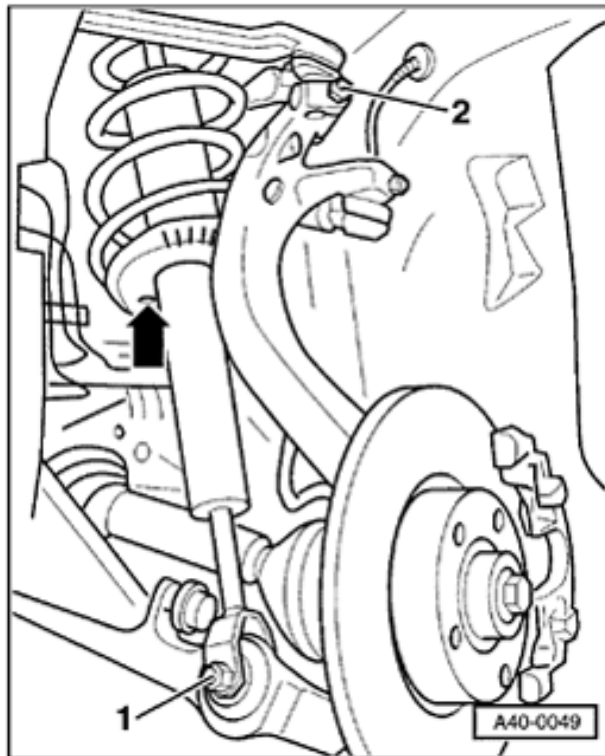
- Unscrew bolt -1-, of suspension strut/track control link.
- Pull suspension strut down and out.

Note:

- ◆ *Be careful not to damage CV boot when removing suspension strut.*
- ◆ *Servicing suspension strut ⇒ [Page 40-24](#)*



Installing



A

- Put in suspension strut so that hole (arrow) in spring seat faces middle of vehicle.
- Bolt suspension strut together with track control link.

Note:

Remove any adhesive remaining on thread of joint bolt.

- Bonded rubber bushings can only be turned to a limited extent. The suspension strut/track control link bolt connection should only be tightened when vehicle is standing on ground.
 - Tighten new nuts to 90 Nm.
- Insert upper links in wheel bearing housing and tighten new nuts -2- to 40 Nm.
 - Press upper links down as far as possible when tightening!
- Tighten nut on joint bolt to 100 Nm.

Use 4 mm socket wrench to hold joint bolt, if necessary.



- Insert cable of ABS wheel speed sensor into bracket on brake caliper.
- Screw on new bolts for suspension strut and tighten to 20 Nm.

Be careful not to damage surface of brake lines!

- Put rubber grommets in plenum.
- Mount wheel and tighten to 120 Nm.